



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 1

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APPLICABILITY: The Automated Response Technology (ART) program is a voluntary residential demand response program that offers third-party "Providers" incentives for reducing energy consumption when requested by PG&E through the dispatch of smart technologies, also known as distributed energy resources (DERs). When aggregated together, DERs have the potential to serve as a virtual power plant (VPP) and provide valuable grid services. The ART program integrated into the California Independent System Operators (CAISO) wholesale market as a Proxy Demand Resource (PDR) and PG&E will bid the program resources at its sole discretion. The PDR models the physical characteristics of a resource supplied to the CAISO and is the basis for bidding, awards, dispatch, outages, and settlements. ART PDRs must comply with the current CAISO Tariff requirements on market participation.

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TERRITORY: This Schedule (Schedule E-ART or Schedule) is available throughout PG&E's electric service area.

SUBSCRIPTION LIMIT: PG&E reserves the right to limit the number of Providers and enrolled customers that participate in Schedule E-ART, consistent with Commission authorization and funding.

PROVIDER: Customers with smart technologies can enroll under this Schedule through a PG&E-contracted Provider. A Provider is a PG&E-contracted entity which can be chosen by a customer to act on behalf of the customer with respect to all aspects of this Schedule including, but not limited to (1) enrollment and disenrollment; (2) event notifications; (3) incentive payments; and (4) scheduling updates which may impact the customer.

PROVIDER CONTRACT TERM: The minimum term of a contract between PG&E and Providers is for a twelve (12)-month period. Customers enrolled in the ART program by a Provider will be disenrolled from ART upon the conclusion of that Provider's contract term, if not renewed.

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PROVIDER'S PORTFOLIO:

Providers may use multiple types of smart technologies in their portfolios to reduce load when dispatched. ART Provider incentives are paid on a performance basis as measured at PG&E's meter level and aggregated to the Provider's portfolio based on actual events or test events.

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Providers will integrate into PG&E's system via bi-directional Application Programming Interface (API) for the purpose of determining customer eligibility and for updates to the enrollment status. PG&E's system will provide confirmation of eligibility in a standard format via Application Programming Interface (API) and will provide updates to that eligibility should they change. PG&E will include the Sub-Load Aggregation Point (Sub-LAP) on a per customer basis. PG&E may provide a more granular level designation for particularly constrained distribution areas. Provider must ensure dispatch availability at these levels.

REQUIREMENTS FOR CUSTOMERS ON A TIME VARYING RATE:

If a customer is on a time-varying rate, the Provider must implement a daily load-shifting strategy during the hours with time-varying rates using the automated technology. The customer has the option to opt out of the daily load shifting strategy, which currently applies to TOU rates and in the future could apply to real time pricing (RTP). Regardless of daily load shifting, all customers will be included in DR events.

CUSTOMER ACCEPTANCE OF TERMS & CONDITIONS:

Customers will be required to accept the program terms and conditions at the time of enrollment. Customers must submit disenrollment requests with their Provider and the Provider will transmit the disenrollment to PG&E via API. A customer will be automatically disenrolled in PG&E's system when their service account is no longer active and that disenrollment will be transmitted to the Provider via API. In the event of a CAISO location registration dispute with another supply-side program, the earliest enrollment date will dictate which program retains the customer. Any disputes arising between Provider and a customer shall be resolved by the Provider and customer.

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CUSTOMER ELIGIBILITY:

Schedule E-ART is available to PG&E residential customers receiving bundled service or Community Choice Aggregation (CCA) service and being billed on a PG&E residential rate schedule. An eligible customer must continue to take service under the provisions of its otherwise applicable schedule (OAS). Providers participating in Schedule E-ART must comply with the terms of this Schedule and associated agreements. Customers cannot simultaneously be enrolled in another supply-side demand response pilot or program offered by PG&E, third-party DR provider (DRP), CCA, or an event-based load modifying program offered by PG&E.

Customer enrollment is limited to one Provider per eligible customer service agreement. Multiple Providers are not able to enroll the same customer service agreement.

PG&E must be able to register customers' service agreements who are participating under Schedule E-ART into the CAISO Demand Response Registration System (DRRS), which requires Load Serving Entity (LSE) approval. If PG&E is unable to register the customer's service agreement and/or the customer's LSE does not allow the customer's service agreement to be registered, then the customer will be ineligible to participate under Schedule E-ART.

In accordance with CAISO requirements, at least 90 calendar days of historic interval meter data using metering equipment (including telephone line, cellular, or radio control communication device) must be submitted to CAISO for each service agreement, prior to that service agreement participating in Schedule E-ART. The meter data must be Revenue Quality Meter Data (RQMD).

There is no minimum CAISO PDR kW requirements for ART Providers. CAISO PDR resources must meet a 100kW minimum size requirement and PG&E, as the Scheduling Coordinator, will combine customers from multiple Providers to achieve the requirement.

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AVAILABILITY,
TRIGGERS &
NOTIFICATION:

Schedule E-ART is available every month of the year, 24 hours-a-day, seven days a week.

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Triggers shall be Day-Ahead, based on the California Independent System Operator (CAISO) market award dispatch, or Day-Of for PG&E system emergencies or near-emergencies for distribution service. Schedule E-ART will be available for dispatch for the duration of CAISO Flex Alerts, Grid Warning, Alerts or Notices, or the Governor's Office has an emergency notice. Schedule-ART be available for the duration of an Alert, Warning, or Notice that is issued prior and up to the 10 a.m. day-ahead market bid deadline.

Total demand response event hours per service agreement can be up to six (6) hours in a day. There is no limit on the number of dispatches in a day or on consecutive days of dispatch.

All operating months begin and end at the beginning and ending of its corresponding calendar month.

For Day-Ahead market events, PG&E will notify the Providers after awards are received, but no later than 5 p.m. the day before dispatch, or as soon as reasonably possible. For Day-Ahead test events, PG&E will notify the Providers by 5:00 p.m. For Day-Of emergency and near emergency events, PG&E will notify Providers as soon as possible, but no later than 1 hour after being informed of dispatch. Notification to customers and the timeline to notify customers is the responsibility of the Providers.

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**CUSTOMER
SPECIFIC
ENERGY
BASELINE:**

To participate under Schedule E-ART, a customer must have ten calendar days of meter data prior to the first day of program enrollment to calculate a valid Customer Specific Energy Baseline (CSEB).

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Each provider's portfolio will have its own CSEB based on the aggregated CSEBs of each customer within the resource. The CSEB on any given day during the program is the sum total of the individual baselines of each service agreement in the portfolio. The program will utilize a 5-in-10 baseline with an optional same-day adjustment. For events that occur on weekdays, each individual service agreement baseline is the average load for each corresponding hour over the five (5) out of ten (10) past similar weekdays prior to an event with the highest energy consumed over the event period. The load during each corresponding hour of the five days will be averaged to calculate a baseline for each hour. For events that occur on weekends, each individual service agreement baseline is the weighted average load for each corresponding hour over the three (3) out of five (5) past similar weekends prior to an event with the highest energy consumed over the event period, with weights of 50-, 30-, and 20-percent applied to the baseline days in order by most recent. Similar weekdays will include Monday through Friday and similar weekends will include Saturday, Sunday, and NERC holidays. Days prior to the event in which the customer was: 1) subject to an event; 2) subject to an outage; or 3) was interrupted will be excluded from the baseline.

The day-of adjustment is the ratio of a) the average load of the first three of the four hours prior to the start of the event to b) the average load of the corresponding hours from the service agreement baseline, as discussed above. The day-of adjustment will be limited to +/- 40% of each individual service agreement baseline in the group. The day-of adjustment is applied by multiplying each hourly baseline value by the day-of adjustment. The day-of adjustment will be applied by default per Customer unless the Provider elects to opt-out of this adjustment. If more than one event occurs on the same day, the day-of adjustment from the event with the earliest start time will be used for the individual service agreement's events that day requiring a day-of adjustment.

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RATES: The payments to Providers under this rate schedule will be determined from the following components:

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- a. Capacity Prices
- b. Capacity Payments

Incentive payments to participating customers are the responsibility of and at the discretion of Providers.

CAPACITY PRICES: The following are Capacity Prices by month as \$/kW values:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
\$2.60	\$2.12	\$1.57	\$2.79	\$7.45	\$12.27	\$12.15	\$27.66	\$28.83	\$13.55	\$2.84	\$6.18

CAPACITY PAYMENTS: PG&E will conduct an analysis of each Provider's Portfolio once per month based on the active service agreements enrolled in PG&E's system in order to calculate Provider incentive payments, referred to as Capacity Payments. Capacity Payments will be based on event performance as measured with PG&E's meter data. In the absence of economic, emergency, or near emergency event performance, test event performance will be used.

The analysis will begin on the first business day of a new month and will include service agreements enrolled through the last day of the prior month. The analysis will conclude by the 15th of the calendar month. Capacity Payments will be issued by PG&E by the last business day the calendar month. For service agreements with incomplete meter data, PG&E will issue a second payment once meter data is available and settlement for those service agreements is calculated.

- Service agreement meter data will be compared to a customer's CSEB to determine the reduction in delivered energy to an enrolled customer's PG&E meter and defined as the load impact.
- The load impact for each event hour that a customer participated in will be assessed and averaged across the entire month to determine the Measured Average Hourly Load Impact. In instances where a customer's Measured Average Hourly Load Impact increases, the value for that customer will be zero.
- To determine Capacity Payments per Provider, Measured Average Hourly Load Impact per customer will be aggregated for the Provider's portfolio.

Monthly Capacity Price (per kW) x Aggregate Measured Average Hourly Load Impact

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PROGRAM TESTING:

PG&E will have the option to call up to one test event per month for resources that do not receive a market award in the given month, including weekends. The test event will be called to demonstrate capacity for the purpose of calculating Capacity Payments. A test event will not exceed three hours in duration. A test event would occur from the 20th day to the last day of a calendar month if unfavorable weather and grid conditions are forecast.

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CONFIDENTIALITY:

PG&E will consider interactions and strategies with Provider to be confidential information, when PG&E and or the provider determines that the information exchanged constitutes or include confidential information. PG&E shall protect this confidential information from public disclosure, and shall not disclose such confidential information to unauthorized third parties, except for PG&E's employees, agents, counsel, accountants, advisors, individual customers who authorize the release of their customer information pursuant to an approved process (such as Electric Rule 24), utility contractors, or Commission staff/contractors who have a need to know such information and have agreed to keep such information confidential and except as provided otherwise in this section, or by operation of state law or regulation, or federal law or regulation.

PG&E will provide the Commission with confidential Provider information under Commission procedures for identifying and claiming confidential treatment. Release of confidential Provider information to utility and Commission contractors will be subject to such parties' agreement to protect the information from unauthorized use or public disclosure on terms consistent with PG&E and the Commission's rules and state or federal law or regulation.

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